1. A security article comprising:

a light transmissive substrate having a first surface and an opposing second surface, the first surface having an optical interference pattern; and

a color shifting optical coating on the second surface of the substrate, the optical coating providing an observable color shift as the angle of incident light or viewing angle changes.

2. The security article of claim 1, wherein the substrate is composed of a plastic material.

3. The security article of claim 2, wherein the plastic material is selected from the group consisting of polyethylene terephthalate, polycarbonate, polyvinyl chloride, polyacrylates, polyacrylonitrile, polystyrene, polypropylene, polynaphthalene terephthalate, and mixtures or copolymers thereof.

4. The security article of claim 1, wherein the optical interference pattern is a diffraction grating pattern or a holographic image pattern.

5. The security article of claim 1, wherein the color shifting optical coating is a multilayer optical interference film including an absorber layer on the second surface of the substrate, and a dielectric layer on the absorber layer.

6. The security article of claim 1, wherein the color shifting optical coating is a multilayer optical interference film including an absorber layer on the second surface of the substrate, a dielectric layer on the absorber layer, and a reflector layer on the dielectric layer.

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7. The security article of claim 1, wherein the color shifting optical coating comprises a plurality of multilayer optical interference flakes dispersed in a polymeric medium.

8. The security article of claim 1, further comprising a release layer on the substrate.

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9. A security article comprising:

a light transmissive substrate having a first surface and an opposing second surface, the first surface having a diffraction grating pattern or a holographic image pattern; and

a color shifting multilayer optical film on the second surface of the substrate, the optical film comprising:

an absorber layer on the second surface of the substrate;

a dielectric layer on the absorber layer; and

a reflector layer on the dielectric layer;

wherein the optical film coating provides an observable color shift as the angle of incident light or viewing angle changes.

10. The security article of claim 9, wherein the absorber layer comprises a material selected from the group consisting of chromium, nickel, palladium, titanium, vanadium, cobalt, iron, tungsten, molybdenum, niobium, ferric oxide, carbon, and combinations or alloys thereof.

11. The security article of claim 9, wherein the absorber layer has a physical thickness of about 30 Å to about 150 Å.

12. The security article of claim 9, wherein the dielectric layer has an index of refraction of about 1.65 or less.

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13. The security article of claim 12, wherein the dielectric layer comprises a material selected from the group consisting of silicon dioxide, aluminum oxide, magnesium fluoride, aluminum fluoride, cerium fluoride, lanthanum fluoride, sodium aluminum fluorides, neodymium fluoride, samarium fluoride, barium fluoride, calcium fluoride, lithium fluoride, and combinations thereof.

14. The security article of claim 9, wherein the dielectric layer is composed of an organic material.

15. The security article of claim 9, wherein the dielectric layer comprises a material selected from the group consisting of acrylates, perfluoroalkenes, polytetrafluoroethylene, fluorinated ethylene propylene, and combinations thereof.

16. The security article of claim 9, wherein the dielectric layer has an index of refraction of greater than about 1.65.

17. The security article of claim 16, wherein the dielectric layer comprises a material selected from the group consisting of zinc sulfide, zinc oxide, zirconium oxide, titanium dioxide, carbon, indium oxide, indium-tin-oxide, tantalum pentoxide, ceric oxide, yttrium oxide, europium oxide, iron oxides, hafnium nitride, hafnium carbide, hafnium oxide, lanthanum oxide, magnesium oxide, neodymium oxide, praseodymium oxide, samarium oxide, antimony trioxide, silicon carbide, silicon nitride, silicon monoxide, selenium trioxide, tin oxide, tungsten trioxide, and combinations thereof.

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18. The security article of claim 9, wherein the dielectric layer has an optical thickness in a range from about 2 QWOT at a design wavelength of about 400 nm to about 9 QWOT at a design wavelength of about 700 nm.

19. The security article of claim 9, wherein the reflector layer comprises a material selected from the group consisting of aluminum, silver, copper, gold, platinum, palladium, nickel, cobalt, tin, niobium, chromium, and combinations or alloys thereof.

20. The security article of claim 9, wherein the reflector layer is composed of a magnetic material.

21. The security article of claim 20, wherein the magnetic material comprises a cobalt-nickel alloy.

22. The security article of claim 9, wherein the reflector layer has a physical thickness of about 300 Å to about 1000 Å.

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23. A security article comprising:

a light transmissive substrate having a first surface and an opposing second surface, the first surface having a diffraction grating pattern or a holographic image pattern; and

a color shifting optical coating on the second surface of the substrate, the optical coating including a polymeric medium and a plurality of color shifting multilayer optical interference flakes dispersed in the polymeric medium, each of the interference flakes comprising at least an absorber layer and a dielectric layer;

wherein the optical coating provides an observable color shift as the angle of incident light or viewing angle changes.

24. The security article of claim 23, wherein each of the flakes has a dimension on any surface thereof ranging from about 2 to about 200 microns.

25. The security article of claim 23, wherein each of the flakes further comprises a reflector layer.

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26. A security article comprising:

a light transmissive substrate having a first surface and an opposing second surface, the first surface having a diffraction grating pattern or a holographic image pattern; and

a color shifting pigment dispersed within the substrate and comprising a plurality of multilayer optical interference flakes, each of the interference flakes comprising at least an absorber layer and a dielectric layer, the pigment providing an observable color shift as the angle of incident light or viewing angle changes.

27. The security article of claim 26, wherein each of the flakes has a dimension on any surface thereof ranging from about 2 to about 200 microns.

28. The security article of claim 26, wherein each of the flakes further comprises a reflector layer.

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29. A method of forming a security article, comprising the steps of:

providing a light transmissive substrate having a first surface and an opposing second surface, the first surface having an optical interference pattern; and

forming a color shifting optical coating on the second surface of the substrate, the optical coating providing an observable color shift as the angle of incident light or viewing angle changes.

30. The method of claim 29, wherein the substrate is composed of a plastic material.

31. The method of claim 30, wherein the plastic material is selected from the group consisting of polyethylene terephthalate, polycarbonate, polyvinyl chloride, polyacrylates, polyacrylonitrile, polystyrene, polypropylene, polynaphthalene terephthalate, and mixtures or copolymers thereof.

32. The method of claim 29, wherein the optical interference pattern is formed by embossing a diffraction grating pattern or a holographic image pattern on the first surface of the substrate.

33. The method of claim 29, wherein the color shifting optical coating is formed by depositing an absorber layer on the second surface of the substrate, and depositing a dielectric layer on the absorber layer.

34. The method of claim 33, further comprising the step of depositing a reflector layer on the dielectric layer.

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35. The method of claim 34, wherein the absorber layer, the dielectric layer, and the reflector layer are each deposited by physical vapor deposition.

36. The method of claim 29, wherein the color shifting optical coating is formed by applying a color shifting ink comprising a plurality of multilayer optical interference flakes dispersed in a polymeric medium to the second surface of the substrate.

37. The method of claim 29, wherein the color shifting optical coating is formed on the second surface of the substrate by coextruding a color shifting material, comprising a plurality of multilayer optical interference flakes dispersed in a polymeric medium, with a material forming the substrate.

38. The method of claim 29, further comprising the step of forming a release layer on the substrate.

39. The method of claim 38, further comprising the step of hot stamping the security article to an object.

40. The method of claim 29, further comprising the step of attaching the security article to an object.

41. The method of claim 40, wherein the object is selected from the group consisting of security documents, monetary currency, credit cards, and merchandise packaging.

42. A security article comprising:

a light transmissive substrate having a first surface and an opposing second surface, the first surface having a diffraction grating pattern or a holographic image pattern; and

a color shifting multilayer optical film on the first surface of the substrate, the optical film comprising:

an absorber layer on the first surface of the substrate; and

a dielectric layer on the absorber layer;

wherein the optical film provides an observable color shift as the angle of incident light or viewing angle changes

43. The security article of claim 42, wherein the substrate is composed of a plastic material.

44. The security article of claim 42, wherein the optical film further comprises a reflector layer on the dielectric layer.

45. The security article of claim 42, wherein the absorber layer comprises a material selected from the group consisting of chromium, nickel, palladium, titanium, vanadium, cobalt, iron, tungsten, molybdenum, niobium, ferric oxide, carbon, and combinations or alloys thereof.

46. The security article of claim 42, wherein the wherein the dielectric layer comprises a material selected from the group consisting of silicon dioxide, aluminum oxide, magnesium fluoride, aluminum fluoride, cerium fluoride, lanthanum fluoride, sodium

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aluminum fluorides, neodymium fluoride, samarium fluoride, barium fluoride, calcium fluoride, lithium fluoride, and combinations thereof.

47. The security article of claim 42, wherein the dielectric layer is composed of an organic material.

48. The security article of claim 42, wherein the dielectric layer comprises a material selected from the group consisting of zinc sulfide, zinc oxide, zirconium oxide, titanium dioxide, carbon, indium oxide, indium-tin-oxide, tantalum pentoxide, ceric oxide, yttrium oxide, europium oxide, iron oxides, hafnium nitride, hafnium carbide, hafnium oxide, lanthanum oxide, magnesium oxide, neodymium oxide, praseodymium oxide, samarium oxide, antimony trioxide, silicon carbide, silicon nitride, silicon monoxide, selenium trioxide, tin oxide, tungsten trioxide, and combinations thereof.

49. The security article of claim 44, wherein the reflector layer comprises a material selected from the group consisting of aluminum, silver, copper, gold, platinum, palladium, nickel, cobalt, tin, niobium, chromium, and combinations or alloys thereof.

50. The security article of claim 44, wherein the reflector layer is composed of a magnetic material.

51. The security article of claim 42, further comprising a release layer on the second surface of the substrate.

52. The security article of claim 42, further comprising an adhesive layer on the optical film.

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